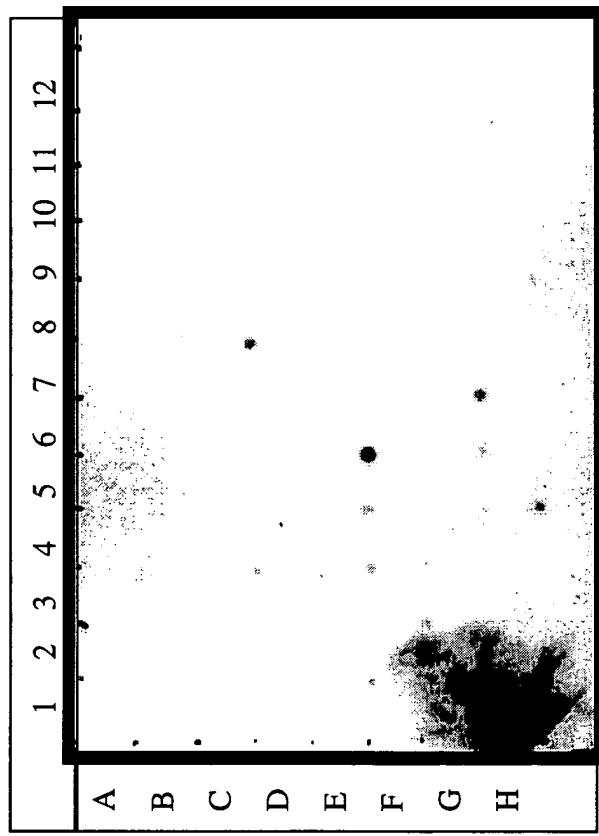


MoAb-based therapy of Cancer: CD38 expression in normal human tissues



Legend: Master blot from Clontech was hybridized with radiolabeled human CD38-specific nucleic acid probe. Only the thymus tissue (from adult and fetal) showed mRNA transcript for CD38. Prostate was also positive but to a lesser extent.

Figure 1

MoAb-based therapy of Cancer: Reversal effect of unconjugated anti-CD38 moAb on IT-induced cytotoxicity in HL-60 cells

Legend: HL-60 cells were incubated with IT alone (C) or IT+RA (5nM) in presence or absence of increasing concentrations unconjugated anti-CD38 moAb. Cell viability was tested after 3 days incubation by using MTS assay

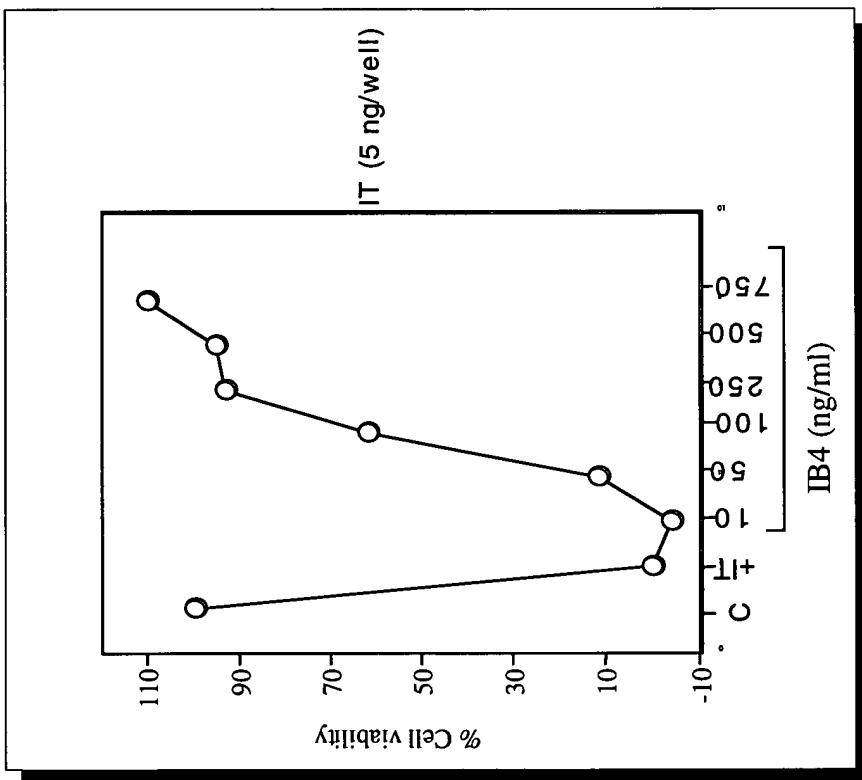


Figure 2

Effect of RA pretreatment on IT-induced killing of HL-60 cells

Legend: HL-60 were incubated with or without RA (5 nM) overnight, washed twice and then recultured in the absence or presence of IT alone or in presence of 100-fold excess of nconjugated anti-CD38 moAb. After 3 days incubation cell viability was terminated using MTS assay

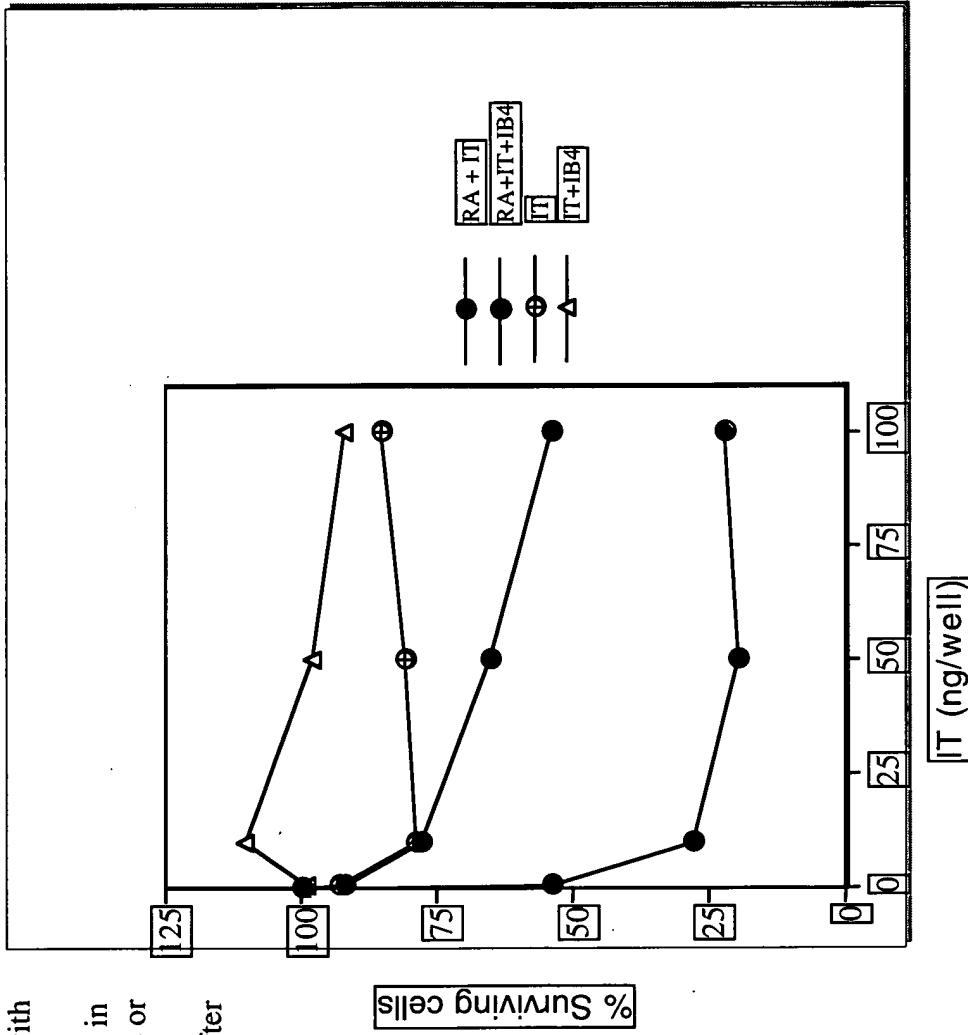


Figure 3

MoAb-based therapy of Cancer:

IB4-gelonin-induced killing of HL-60 cells in presence of RA

Legend: HL-60 cells were incubated
For 3 days in presence of IT or gelonin
Alone or in presence of 5 nM RA.
Cell viability was checked by MTS assay.

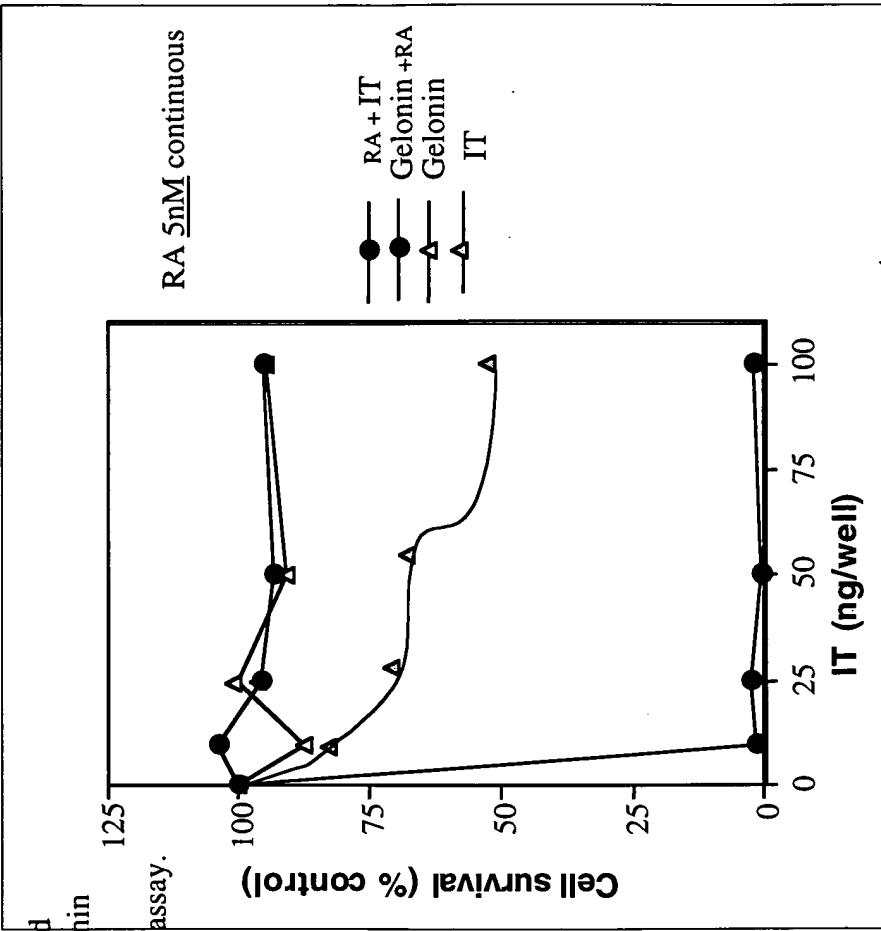


Figure 4

MoAb-based therapy of Cancer:

Effect of increasing RA conc.

Legend: HL-60 were cultured in presence
Of IT or unconjugated anti-CD38 moAb
Alone the presence of increasing amounts of RA
For 3 days. At the end of incubation, cell viability
Was determined by MTS assay

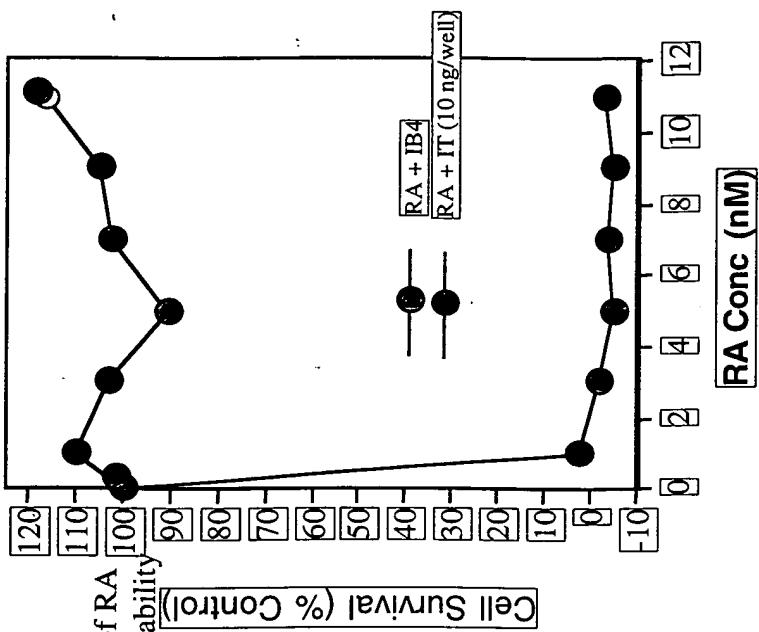
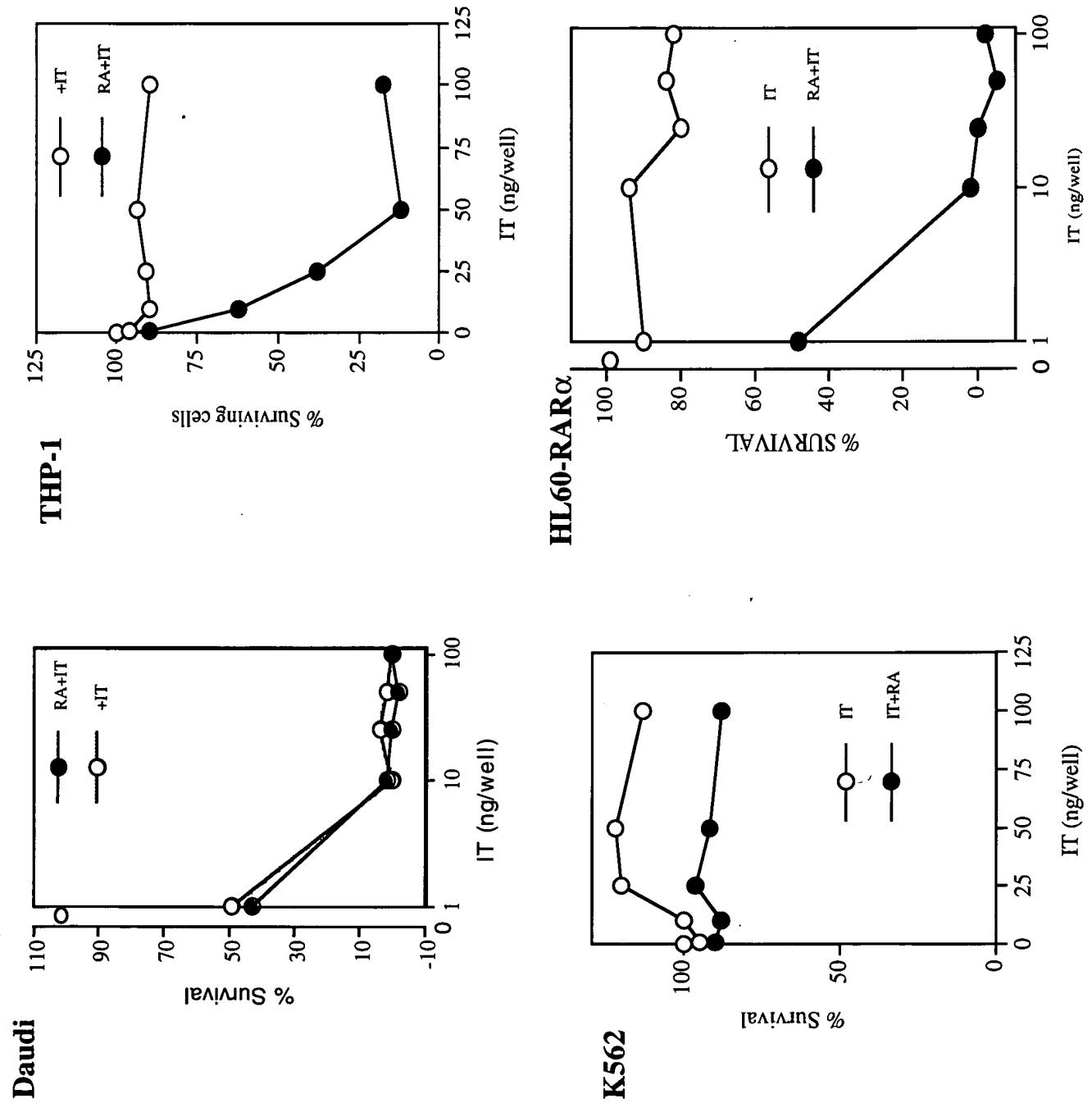


Figure 5



MoAb-based therapy of Cancer:

IT-induced killing of Doxo-resistant HL-60 cells

Legend: HL-60 subcloned cells, resistant to Adriamycin-induced killing were cultured With IT alone in the presence of 5 nM RA. After 3 days incubation, cells viability was tested using MTS assay.

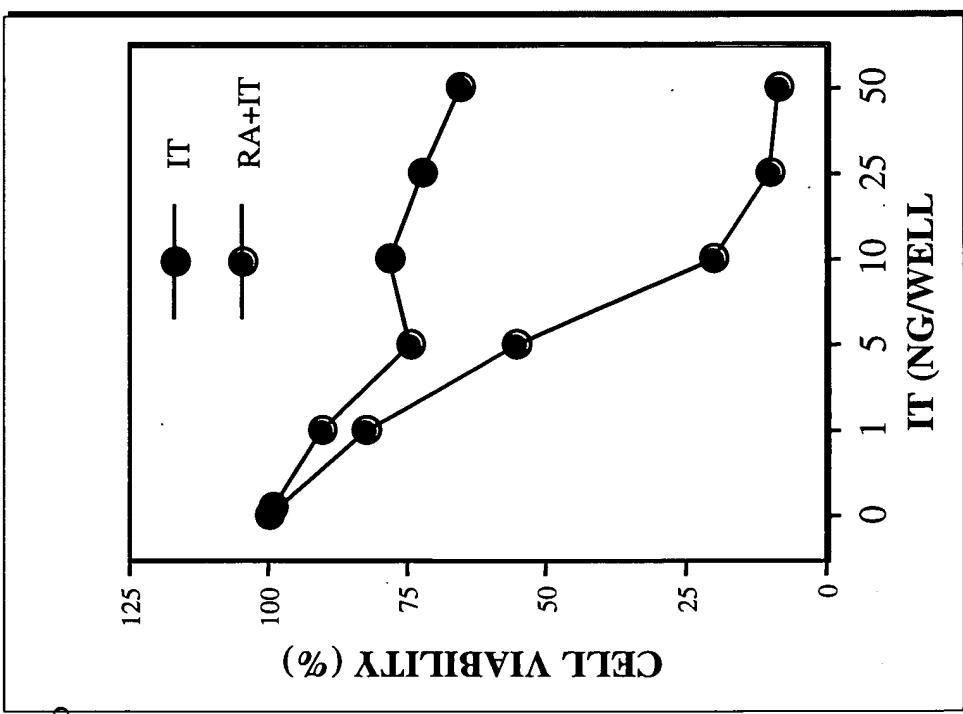


Figure 7

MoAb-based therapy of Cancer:

IT-mediated killing of MZ (NHL) cells

Legend: A non-Hodgkin lymphoma cell line that has a high basal expression of CD38 antigen was incubated with IT in presence or absence of RA. The cell cell viability was checked after 3 days culture using MTS assay.

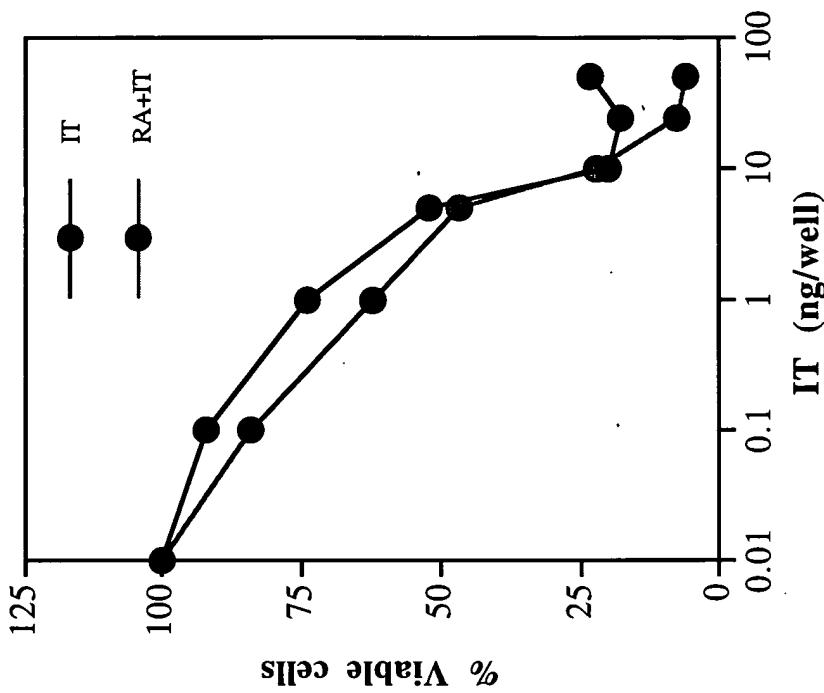
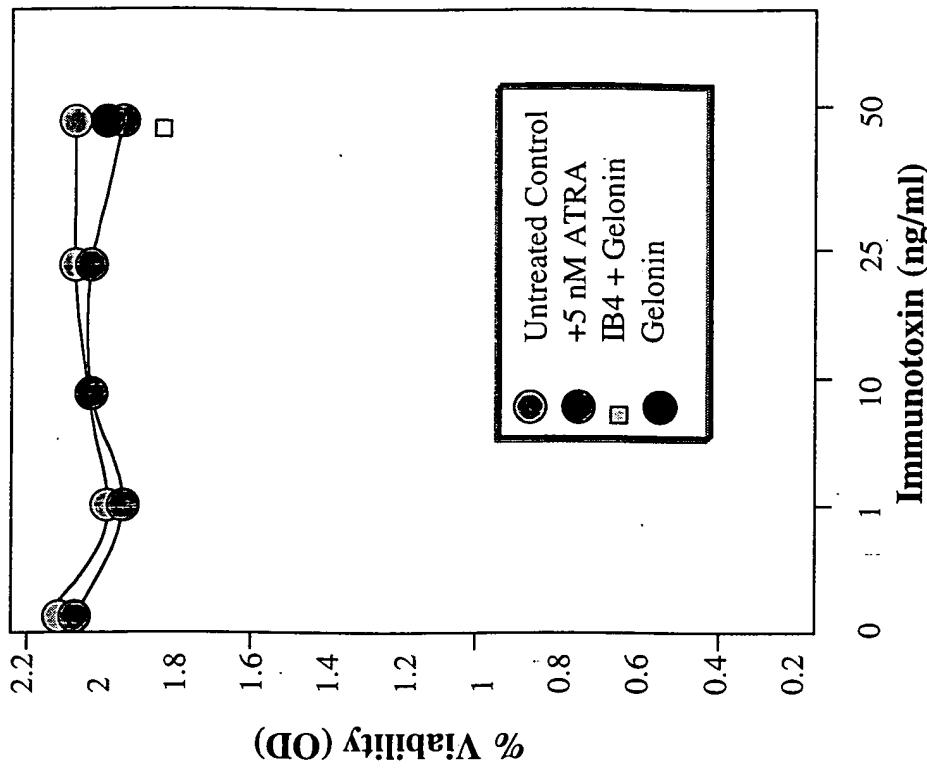


Figure 8

Figure 9



Legend: An HL-60 subclone with mutated RA-Ralpha gene that renders these cells resistant to RA-induced CD38 expression, was cultured with IT alone or in presence of 5 mM RA. After 3 days the cell viability was determined using MTS assay.

Potential targets for anti-CD38 bound toxin treatment

Cell target	Basal CD38	CD38 after RA treatment
AML	50 \pm 10	180 \pm 20
APL	6 \pm 4	120 \pm 30
Lymphomas	80 \pm 20	210 \pm 10
Myelomas	60 \pm 20	180 \pm 25
SLE		
Myesthenia gravis		
Rheumatoid arthritis		
Organ Transplantation		

B cells producing self reactive ab
Self reactive T lymphocyte

Table 1